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AVIFAUNA OF THE ANAIMALAI HILLS (WESTERN GHATS) OF SOUTHERN INDIA¹

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(With thirty-two text-figures)

Key words: Anaimalai Hills, Western Ghats, India, evergreen forest, birds, conservation. Ornithological records obtained in the Anaimalai Hills during a 2-year period between 1991 and 1993 are presented. Information concerning nidification, seasonal occurrence and relative abundance are furnished wherever possible. Historical comparisons are made and conservation concerns raised for some species that are typical of the evergreen forest habitat. A total of 218 species were recorded, including 12 Western Ghats endemics. Some significant species not noted in this period are also discussed. The quantitative information on relative abundance presented herein will facilitate objective comparison with population trends in the future. It is hoped that this account would: a. serve as a bedrock for the development of a more comprehensive database of the avifauna of this unique, threatened physiographic area, and b. stimulate the development of census programmes here and elsewhere in the Western Ghats for long-term monitoring of forest bird populations.

INTRODUCTION AND STUDY AREA

The Anaimalais (Tamil: *Anai*=elephant; *malai*=hills) is a range of lofty mountains in the southern Western Ghats of India, extending from Coimbatore dist., western Tamil Nadu in the east, to the southeastern fringes of the Nelliampathy Hills of Kerala in the northwest. Southwards, the Anaimalais are contiguous with and part of the High Range and Kanan Devan mountains, wherein lies Anaimudi, the tallest peak in southern India (2695m) (Fig. 1). Ornithological information from the Anaimalais is scarce, largely because of the absence of any established hill station resort in these hills. In contrast, the

adjacent ranges of Palnis and Nilgiris have historically been well covered by various ornithologists and birdwatchers due to the accessibility afforded by two major hill stations, Kodaikanal and Uthagamandalam respectively. Burg *et al.* (1994), in their extensive bibliography of Indian ornithology, cite more than ten articles concerning the avifauna of Palnis and Nilgiris which appeared in the Society's Journal between 1877 and 1958. Even the adjacent Nelliampathy Hills have been well surveyed, the bulk of the work being that of Kinloch (1921, 1923a and b), who presented detailed accounts on the birds recorded here over a 10-year period. Ali and Ripley (1987) make numerous references to the Palnis and Nilgiris, but mention the Anaimalais scantily. Just one paper on the birds of Anaimalais is cited in the bibliography of Burg *et al.* (1994).

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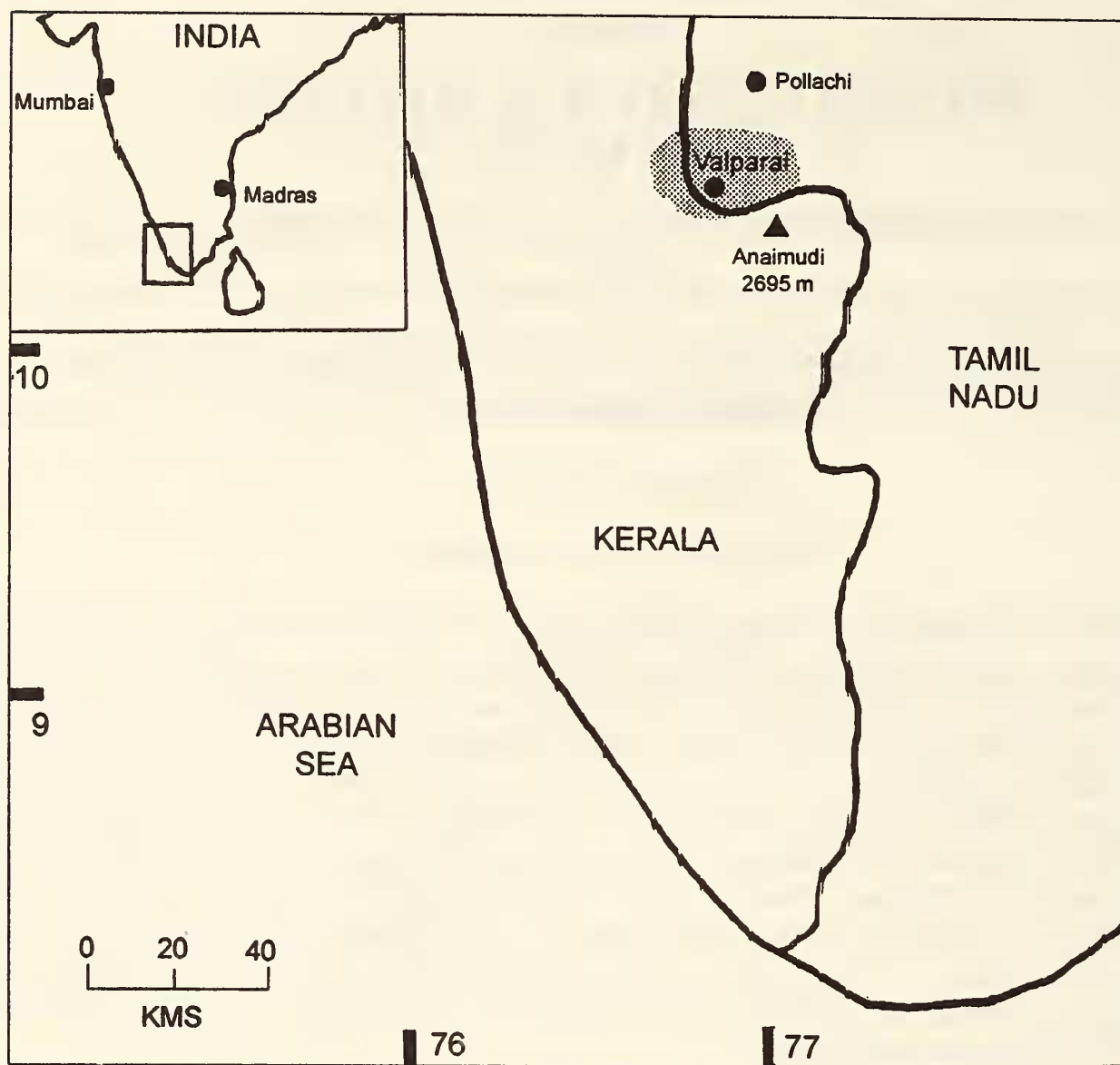


Fig. 1: Southwestern section of the Indian peninsula showing the study area and its approximate extent (shaded gray).

The little that is known specifically on the avifauna of Anaimalai Hills stems mainly from the collection expeditions of Ali (1935-37) and anecdotal notes made by Stonor (1946). Sálim Ali spent a few days in 1933 collecting birds in three localities in the Anaimalais, during a survey of the erstwhile princely states of Travancore and Cochin. Stonor presented observations based on a month-long stay in the Parambikulam area in 1944. More recently, Vijayan (1978) appended a short list of the birds recorded in his general survey report of the Parambikulam Wildlife Sanctuary, and Sugathan (1981) surveyed the same area for the habitat of Ceylon Frogmouth (*Batrachostomus moniliger*). My own recent publications are cited where relevant in this account.

This paper presents the first detailed and systematic account of the avifauna of Anaimalai hills, based on the analysis of bird records and census data collected during a 2-year study, between August 1991 and July 1993, in these hills. The study area (Fig. 1) included the following localities, which covered the entire altitudinal range in this area — from foothills to high elevations.

(i) Indira Gandhi Wildlife Sanctuary, Coimbatore dist., Tamil Nadu: The study was based in Top Slip, a settlement 35 km by road from Pollachi (Fig. 1). Top Slip, named so because lumber was traditionally slipped from the hilltops down to the plains during the colonial era, has had a history of logging. However, some of the evergreen forests in the area have been protected from clear felling. Karian Shola, a

patch of Southern Tropical Wet Evergreen Forests (Champion and Seth 1968), that extends right up to the settlement, has recently been elevated to the status of National Park. Rainfall varies heavily with altitude in the sanctuary. Top Slip, located at an elevation of 750 m, experienced a precipitation of 1464 and 1402 mm for the years 1991 and 1992 respectively. The current work focused on the evergreen forests near Top Slip (Karian Shola, Anaigundi Shola, Umayamalai and Varagaliar forests, which lie between 750 and 1000 m).

Periodic bird surveys were carried out at various elevations of the 1250 sq. km sanctuary. The habitats and altitudes covered were: the scrub vegetation at the foothills (*c* 300 m), the deciduous and bamboo forests of the lower slopes (300-750 m), tea and coffee plantations and scattered fragmented sholas (Puthuthottam and Kadambarai) of the Valparai Plateau (1000-1700m) (*c* 10°19' N;76°58' E), and the montane, elfin forests and grassy hills of the highlands (Grass Hills, *c*. 1700-2200m).

(ii) Parambikulam Wildlife Sanctuary (235 km²) (*c* 10°25' N;76°43' E), Kerala: Bird surveys were carried out periodically in the lush evergreen forests of Karimala Gopuram (peak elevation: 1440 m), the Tunakadavu and Parambikulam Reservoirs and the mixed deciduous forests that surround them, and in the southern section of Karian Shola, which is part of the Sungam Range of the sanctuary. For a detailed description of Parambikulam, see Vijayan (1978) and Sugathan (1981).

Surveys were also done sporadically in two areas on the fringes of the Anaimalai hills: the Sholayar forests (banks of the Sholayar river), south of and contiguous with Parambikulam; and the Chalakudy forests west of Parambikulam, by the old and derelict Chalakudy-Parambikulam Forest Tramline (also called the Cochin Forest Tramline — see Ali (1935) and Vijayan (1978).

Wherever possible, quantitative information is given on seasonal relative abundance

based on census data, which is important in the face of the continuing destruction of mature forests all over the Western Ghats, because it provides an objective means with which future trends in population and relative abundance can be compared. A bird list is appended, with status information for each species and the area(s) where they were recorded. Some species that are conspicuously *absent* from this list are also discussed in a separate section. Because much of the work focused around Top Slip, equal coverage could not be extended to all the elevations. However, it is hoped that this work will serve as a foundation for the development of a more comprehensive database for the avifauna of this unique area.

METHODS

Bird records were maintained in detail during the daily field trips in the area. Parameters noted included plumage details, elevation, habitat, feeding, behaviour and evidence of nesting (if any). Quantitative information was gathered by conducting censuses of forest birds along a 1 km line-transect inside Karian Shola. Censuses were done once a week in most months, with up to 10 counts in some months (average: 6.1 counts/month; N=22 months). The transect started at the edge of the evergreen forest behind Top Slip, where there was a considerable amount of secondary growth. Birds seen and/or heard farther than approximately 100 m from the transect were discounted, but this does not necessarily imply that coverage of the transect was thorough. Censuses were conducted in the early morning hours, the exact time of study varying with weather conditions. When inclement weather conditions precluded a morning census, the work was done in the evening.

The following three criteria were used to determine relative abundance. Assignment of a species to any of these criteria was made exclusively by the number of records for that species over a period of time.

COMMON = Encountered daily in relatively large numbers, more than 10 individuals/day. Examples: Yellowbrowed bulbul, Hill Myna.

UNCOMMON = Observed on most days in relatively low numbers, 1-10 individuals/day, although may be sporadically seen in larger numbers. Examples: Great Pied Hornbill, Crested Serpent Eagle.

RARE = Encountered 15 times or less a year. Infrequently encountered and usually found in small numbers. Examples: Black Crested Baza, Bay Owl.

RESULTS AND DISCUSSION

A total of 218 species was recorded, 12 of which are endemic to the Western Ghats (see Appendix). Amongst the more significant records was the rediscovery of the Bay Owl, which constituted the second report of this enigmatic species in the Western Ghats (see species account). The census data yielded a numerical idea of the seasonal relative abundance of many forest birds — a visual display of the patterns obtained is provided (Figs. 2-31), and the patterns are discussed below in the species accounts.

SELECTED SPECIES ACCOUNTS

Most of the species covered in this section are typical of the highly human-encroached evergreen forest biotope and hence need careful long-term monitoring into the future. For scientific names, see Appendix. Dates are provided wherever they may be significant.

Malay or Tiger Bittern: Rare. One record of a solitary bird seen on 13.v.93 in the evergreen forests of Karian Shola, by the Kerala-Tamil Nadu border.

Black-crested Baza: Rare. Summary of sight records: 10.i.92 single, Karian Shola; 20.xii.92, 21.xii.92, 4 or 5 individuals and a pair, respectively, Karian Shola; 6.i.93, reliably reported from Varagaliar Shola; 6.i.93-9.i.93 a pair seen everyday in Karian Shola; 22.i.93, one

seen at Karian Shola - This bird had chestnut coloration on breast band and back, suggesting that it belonged to the Kerala race *A. l. leuphotes*. (No inferences could be made on racial identity of the birds seen earlier).

Crested Goshawk: Rare. A pair seen 24.i.93 in a fluttering circular display flight over the forests of Akkamalai (1727 m) en route to Grass Hills, past the Valparai plateau. Upper tail coverts very white, and this helped in its identification (see King *et al* 1983). One bird seen from within 5 m, perched on ground in Karian Shola 5.iii.93.

Besra Sparrow-Hawk: Rare. Four sight records: 5.xi.92 and 22.i.93, Karian Shola; 26.xii.92 Chalakudy; 27.i.93, Anaigundi Shola.

Crested Hawk-Eagle: Uncommon. Noted regularly all year. Usually seen perched on roadside trees by the Pollachi-Top Slip hill road.

Observed on ground devouring a freshly killed Grey Jungle-fowl in October 92.

Rufousbellied Hawk-Eagle: Rare. Seen 4 times: 25.x.91, 7.x.92, and 13.ii.93 over Karian Shola; 20.xii.92 over deciduous forests near Top Slip. Constantly harried by crows, more so than other raptors, which was sometimes a clue to its identity from afar.

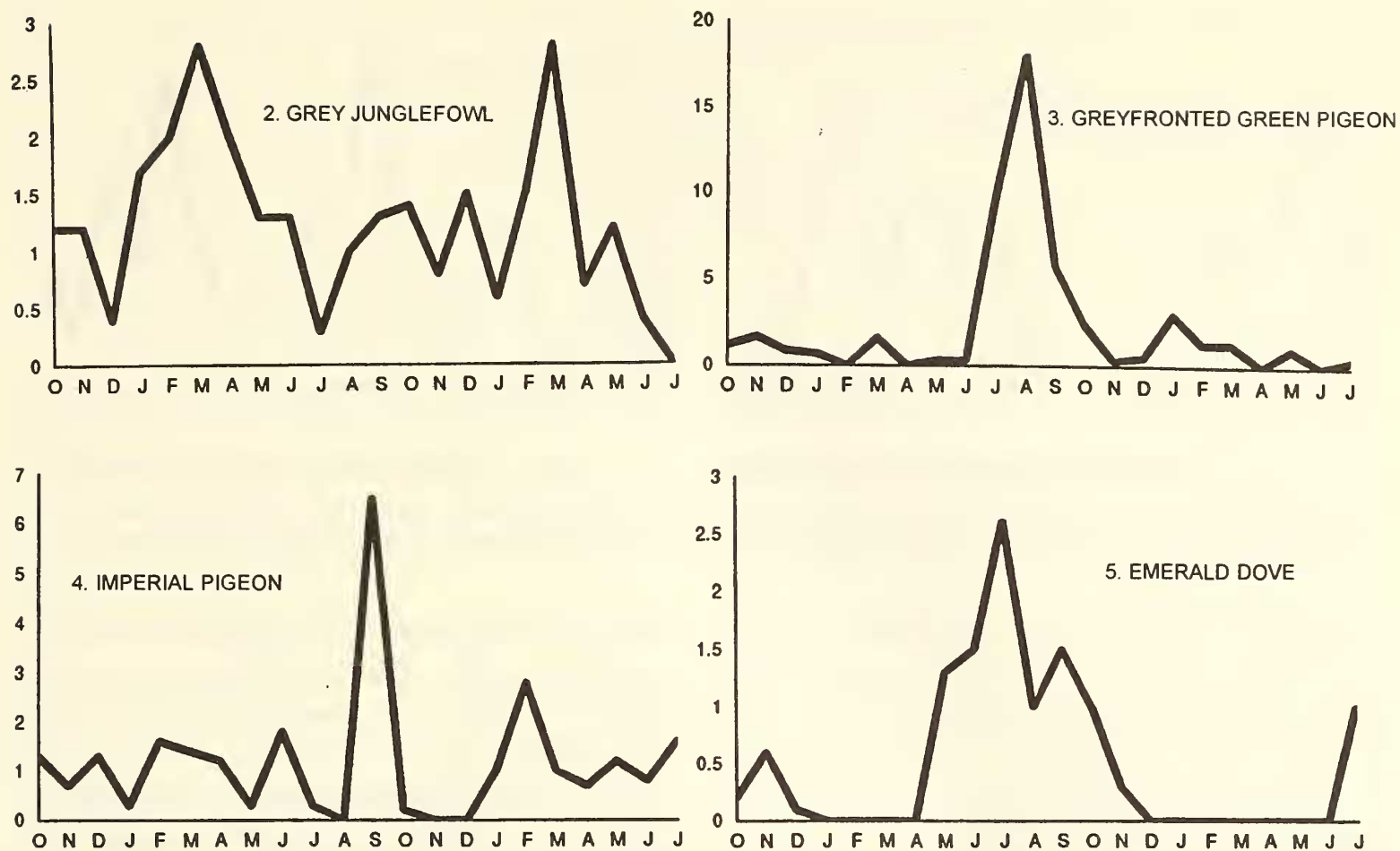
Greyheaded Fishing Eagle: Rare. Seen across the state border by Tunakadavu lake (c. 11 km by road SW of Top Slip) 19.x.91. Adult seen carrying nest material (twigs) at Manampalli 23.i.93.

Osprey: Rare. Winter visitor. Seen at Tunakadavu lake October and December 92. Also, one seen on 20.i.93 over foothills scrub.

Shaheen Falcon: Rare. Possibly breeds on the steep cliffs by Pollachi-Top Slip road. One bird seen there 7.xii.92; A pair seen indulging in spectacular midair courtship over foothills scrub 16.xii.92.

Jungle Bush Quail: Rare. Possibly commoner than they appear. Seen once in December 91 on ground in open deciduous forest mixed with bamboo.

Red Spurfowl: Uncommon. Usually seen



Figs. 2-5: Monthly mean relative abundances of four species of forest birds along a 1-km transect through the evergreen forests of Karian Shola, Top Slip, between October 1991 and July 1993. X-axis (abscissa) represents months; Y-axis (ordinate) represents mean number of encounters per kilometre.

in forest clearings. A precocial chick (with a conspicuous yellow mid-dorsal stripe) was seen with a parent on 9.iii.93.

Grey Junglefowl: Common. Breeding resident. Usually 1-2 ($\bar{x}=1.3/\text{km}$; $N=136$ counts) birds encountered in Karian Shola in the census trail (see Fig. 2).

Greyfronted Green Pigeon: Common ($\bar{x}=2.08/\text{km}$; $N=136$ counts). Two nests found in January 93. Local movements dictated largely by fruiting of fig trees, hence the spurt in abundance in certain months (Fig. 3).

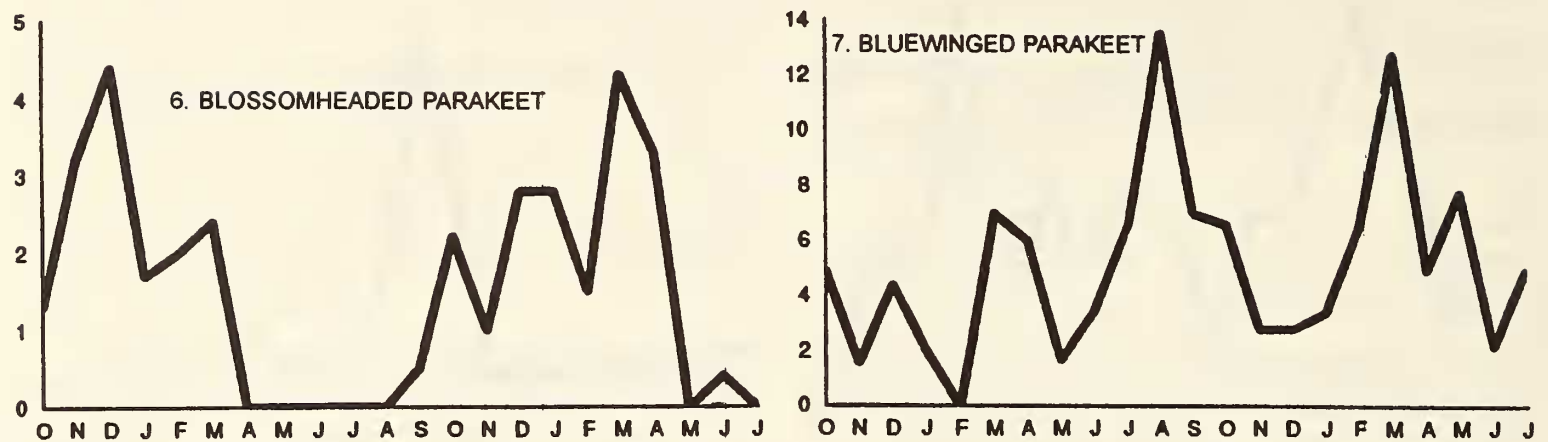
Nilgiri Woodpigeon: Rare. Seen twice, single birds on both occasions: 7.xi.91, Karian Shola; and January 93 in mixed bamboo jungle near Top Slip settlement. Ali and Ripley (1987) report it from the Anaimalais, and indicate its presence at all elevations. Judging subjectively from their account, it appears that this species has

declined in numbers. Certainly a species that needs close scrutiny of conservation biologists.

Imperial Pigeon: Common. A year-round resident with fairly stable, albeit thin local numbers ($\bar{x}=1.1/\text{km}$; $N=136$ counts) (Fig. 4). The big peak evidenced in September 92 was due to the fruiting of a large fig tree by the census trail.

Emerald Dove: Status varies with season (see Fig. 5). Uncommon from monsoon through the winter season (June-December); Rare or absent in the drier months of spring and summer (January to May). Nest with 2 pale brown eggs incubated by female seen in evergreen forest 27.x.92. Possibly migrates altitudinally to wetter regions after breeding. Returns at the onset of pre-monsoon showers in late May (sighted immediately after pre-monsoon showers on 21.v.93 after a long absence).

Blossom-headed Parakeet: Status varies



Figs. 6-7: Monthly mean relative abundances of two species of parakeets along a 1-km transect through the evergreen forests of Karian Shola, Top Slip, between October 1991 and July 1993. X-axis (abscissa) represents months; Y-axis (ordinate) represents mean number of encounters per kilometre.

seasonally. Common at all times except immediately before and during the southwest monsoon (April-September), during which it is rare or absent (see Fig. 6). It may be an altitudinal migrant with local movements obviously influenced by the monsoon.

Blue-winged Parakeet: Common. Usually 4-5 individuals encountered in the census trail all year ($\bar{x}=4.8/\text{km}$; $N=136$ counts), but occasional peaks of up to 14 individuals evident due to flowering of *Bombax* and other forest flowering trees (Fig. 7).

Malabar Lorikeet: Common ($\bar{x}=2.08/\text{km}$; $N=136$ counts). Local movements influenced by flowering of trees, and hence the fluctuation in local abundance (Fig. 8).

Pied Crested Cuckoo: Rare. Two records: June 92, foothills scrub; 12.v.93, Top Slip. Evidently a southwest monsoon visitor as in many other parts of India (Ali and Ripley 1987, Khachar 1989).

Large Hawk-Cuckoo: Rare. Single adult seen 26.x.91 Karian Shola. Coloration pattern was distinctive enough for identification. Hence, the doubt expressed by Ali and Ripley (1987) on reliability of winter sight records is probably unwarranted, at least for adult birds.

Bay Banded Cuckoo: Status unclear. Recorded mostly aurally between February and May 92 and 93. Song often heard during this

time. Evidence supports Ali and Ripley's (1987) contention that the status is difficult to ascertain because of the bird's unobtrusiveness in the nonbreeding season.

Sirkeer Cuckoo: Rare. Noted twice: 16.i.93 in the scrubby, rocky slopes downhill from Top Slip; 20.i.93 in foothills scrub. Ali (1935) and Kinloch (1921, 1923) did not record this species in their surveys of the Anaimalais and Nelliampathies respectively. There is no record of its occurrence in the Palni Hills either.

Bay Owl: Rare. Recorded twice in Karian



Fig. 8: Monthly mean relative abundance of Malabar lorikeet along a 1-km transect through the evergreen forests of Karian Shola, Top Slip, between October 1991 and July 1993. X-axis (abscissa) represents months; Y-axis (ordinate) represents mean number of encounters per kilometre.

Shola, on Kerala and Tamil Nadu sides of the border, on 14.ii.92 and 6.iv.92 respectively. The bird was photographed at daytime as it perched asleep on a low branch in deep evergreen forest. This was a re-discovery of the species in southern India, following the first report by Hussain and Khan (1978) in the Nelliampathies. See Kannan (1993a) for more details and discussion.

Scops Owl: Status unclear. The familiar, monotonous, *uk-ruku* calls heard often at nights around Top Slip. One bird *seen* calling too, confirming its identification. This suggests that the call of the peninsular Indian race may be the same as that described for the north Indian race (see Ali and Ripley 1987).

Forest Eagle Owl: Rare. Perhaps commoner and overlooked due to nocturnal habits and deep forest habitat. Seen occasionally in Karian Shola in daytime, perched high up in the canopy and often mobbed by grey hornbills and drongos. Once seen feeding on a giant squirrel (Kannan 1994c).

Brown Fish Owl: Rare. May be commoner than it appears for reasons cited above. Seen often (same pair/individual?) by the water hole opposite Karian Shola watch tower.

Brown Hawk-Owl: Uncommon. The repetitive, soft *oo-uk* calls heard almost every night around Top Slip, more so from late December through May, hence probably also breeds in the area. Also, heard at Sholayar.

Ceylon Frogmouth: Rare. Seven records from evergreen and open bamboo forests. These constitute the first record of this species from Tamil Nadu. For details see Kannan (1993c, 1994b). Vijayan (1978) included this species in his Parambikulam list; Sugathan (1981) noted it in Parambikulam during his overall survey of its habitat.

Great Eared Nightjar: Rare, but perhaps commoner. The distinctive whistling *vee-veeeu* calls heard often on moonlit nights January through April inside deep evergreen forests. Flushed occasionally from ground at daytime in several evergreen forest patches (Karian Shola,

Varagaliar, Karimala Gopuram, Vengoli). Heard also by the Sholayar river.

Indian Jungle Nightjar: Presumably rare. The unmistakable *chuckoo-chuckoo-chuckoo* call heard near Top Slip twice: 13.ii.93 and 29.v.93, both at dusk from bamboo-clad forested valleys.

Long-tailed Nightjar: Uncommon. Heard almost everyday from dusk through moonlit nights in November-January. Two calls recorded: the commonest call was a loud, shrill *Chowk!* (or *Chaunk*) repeated often through the night. A bird that was seen making this call at Top Slip had typical nightjar features: white on throat, tail and wings (the last seen flashing at flight). The second call was a soft *druk-druk, druk-druk* etc, of the quality of a frog's, usually followed by the commoner call.

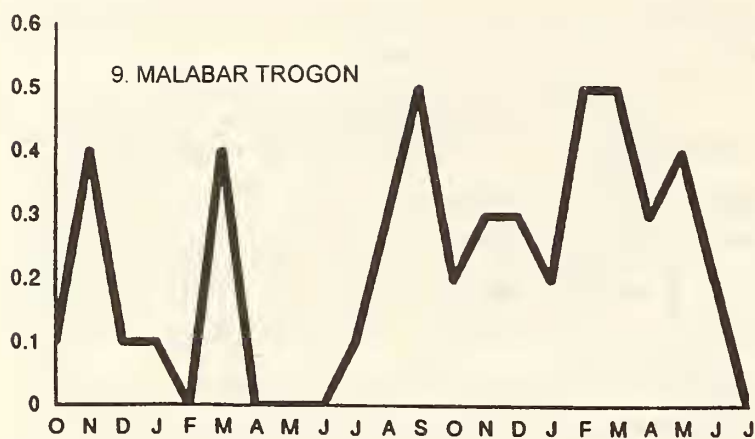
Indian Edible-nest Swiftlet: Uncommon. Seen in small parties flying around cliffs and above shola forests at Top Slip and at higher elevations (Grass Hills). Nowhere was there evidence of the huge colonies reported by Ali and Ripley (1987).

Large Brownthroated Spinetail Swift: Common. Seen every evening as hordes of individuals fly at top speed in a southwesterly direction over Top Slip towards some roosting site. A few individuals occasionally seen flying in the opposite direction early in the mornings, suggesting that the birds probably have a circuitous route.

Whiterumped Spinetail: Rare. Small numbers observed flying in mixed flocks off cliffs and over evergreen forest clearings. Ali (1935) recorded it in Parambikulam, and indicated that the species is uncommon overall in the southern Western Ghats.

Alpine Swift: Rare. One seen on 4.x.91, 6 seen on 6.viii.92 and 2 seen on 23.x.92 near Top Slip.

Malabar Trogon: Uncommon. Most days recorded aurally. Individuals or in loose pairs, widely dispersed in the evergreen forest ($\bar{x}=0.2/\text{km}$; $N=136$ counts), often difficult to find (Fig. 9). Occasionally seen in mixed hunting



Figs. 9: Monthly mean relative abundance of Malabar trogon along a 1-km transect through the evergreen forests of Karian Shola, Top Slip, between October 1991 and July 1993. X-axis (abscissa) represents months; Y-axis (ordinate) represents mean number of encounters per kilometre.

parties. Signs of nesting detected in February 92 when a male was flushed from a hole in a dead stump in deep evergreen forest. Noted also at Kadambarai Shola (Valparai Plateau) and Chalakudy forests.

Bluebearded Bee-Eater: Rare. Nests in steep earthen banks flanking hill roads. Excavating parents were often flushed by passing vehicles in December 92. Nests are active by January. Four nests discovered. Seen rarely outside of breeding season, perhaps owing to its



sluggishness. Most sightings in open bamboo and deciduous forests. Sometimes seen in evergreen forest edges and clearings.

Broadbilled Roller: Uncommon. Singly or in pairs seen sporadically, in clearings amidst evergreen forest. Curiously no records between December 91 and March 92, and also during the southwest monsoon (June-August) of both years, suggesting some local movements.

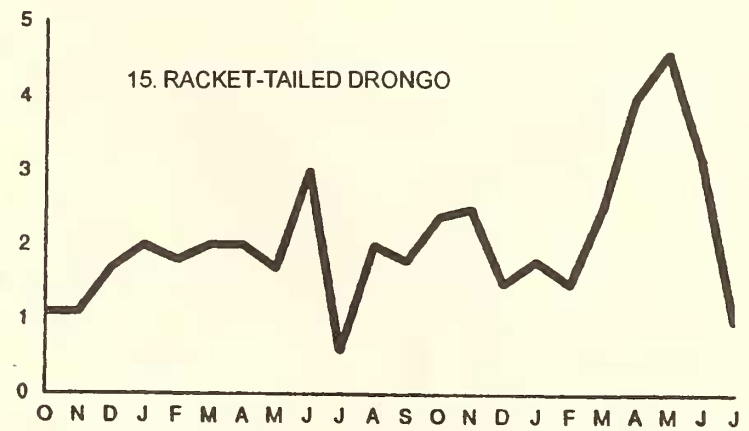
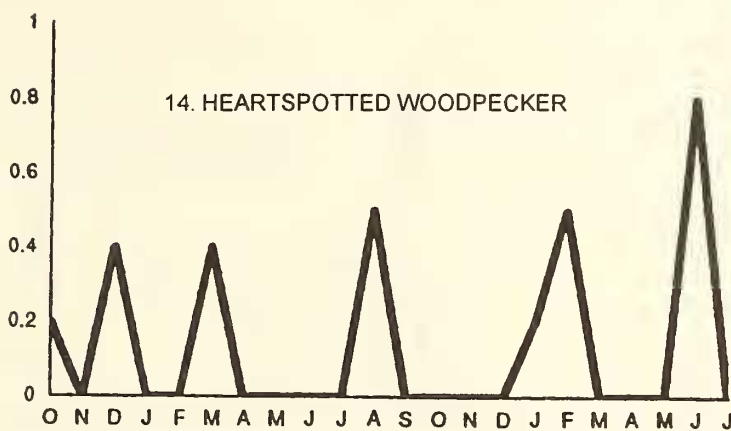
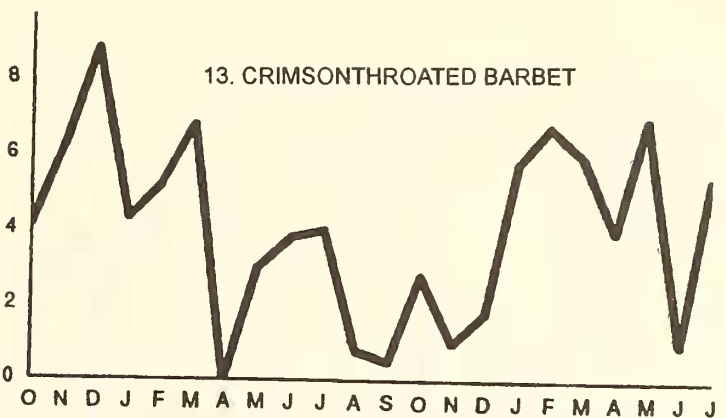
Malabar Grey Hornbill: Common. Breeding resident of evergreen and moist deciduous forests. Average of 4.1 birds encountered per km in Karian Shola (N=136 counts), with occasional peaks caused by the influx of individuals attracted to fruiting fig trees (Fig. 10). For its nesting habitat ecology in the Anaimalais, see Mudappa and Kannan (1996).

Great Pied Hornbill: Uncommon. Breeding resident and locally nomadic. Noted erratically in census trail (Fig. 11). Population in the Top Slip area estimated around 35 birds for most of the year. For details on local status, ecology and conservation issues, see Kannan (1993b, 1994a, 1997). Recorded nesting also at Chalakudy and Sholayar. Nest predation by *Kadar* tribals widespread in Kerala, especially in Chalakudy forests.

Small Green Barbet: Common. As in



Figs. 10-11: Monthly mean relative abundances of two species of hornbills along a 1-km transect through the evergreen forests of Karian Shola, Top Slip, between October 1991 and July 1993. X-axis (abscissa) represents months; Y-axis (ordinate) represents mean number of encounters per kilometre.



Figs. 12-15: Monthly mean relative abundances of four species of forest birds along a 1-km transect through the evergreen forests of Karian Shola, Top Slip, between October 1991 and July 1993. X-axis (abscissa) represents months; Y-axis (ordinate) represents mean number of encounters per kilometre.

many frugivores, local abundance fluctuates widely with respect to the fruiting of figs and other forest fruits (Fig. 12). More vocalisation in summer may partly account for increased frequency of encounters.

Crimsonthroated Barbet: Common (\bar{x} =4.3/km; N=136 counts). As in the previous case, wide variations evident in local numbers (Fig. 13), but again, summer census figures may be at least partially biased and inflated by the increased vocalisation.

Rufous Woodpecker: Rare. Seen once, 27.iv.92, in mixed bamboo forests near Top Slip.

Speckled Piculet: Status unknown. Two records, both at high elevations: 29.x.92, Puthuthottam Estate near Valparai town; 12.v.92, evergreen forests of Akkamalai (1700 m) enroute to Grass Hills.

Indian Great Black Woodpecker:

Uncommon. Breeding resident. Found in both evergreen and moist deciduous forests. Active nest discovered February 93 in Karian Shola.

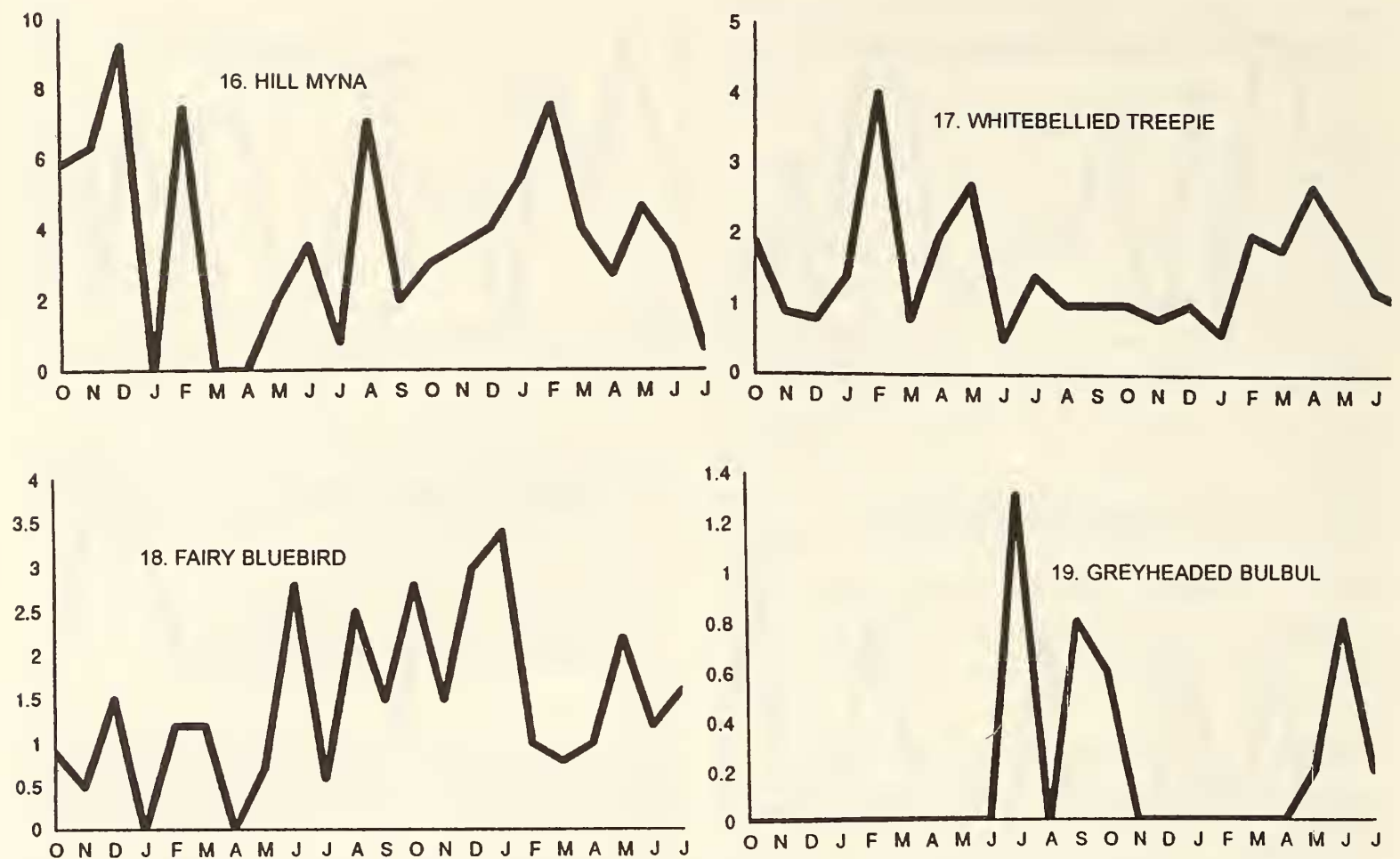
Heartspotted Woodpecker: Uncommon. Occurs in low numbers in evergreen forests (Fig. 14). Adult seen feeding fledged chick 21.v.92.

Indian Pitta: Rare in Top Slip. Winter visitor. Maybe commoner in lowlands. Heard once each in October 91 and October 92 in Top Slip, presumably on autumn migration; also heard several evenings in January 93 around Top Slip; recorded roosting amongst tea gardens in Valparai; one sighting in the foothills scrub, January 93.

House Swallow: Rare(?) Seen only in Grass Hills. Breeds by the Konalar river.

Blacknaped Oriole: Rare. Winter visitor. Seen in evergreen and mixed forests a few times between January and March 93.

Haircrested Drongo: Rare. Maybe



Figs. 16-19: Monthly mean relative abundances of four species of forest birds along a 1-km transect through the evergreen forests of Karian Shola, Top Slip, between October 1991 and July 1993. X-axis (abscissa) represents months; Y-axis (ordinate) represents mean number of encounters per kilometre.

commoner. Seen a few times in January 93 on flowering *Acrocarpus* trees in Karian Shola.

Greater Racket-tailed Drongo: Common. Densities remain more or less steady throughout the year ($\bar{x}=1.88/\text{km}$; $N=136$ counts, Fig. 15) in evergreen forest. Apparently very territorial. Pugnacious, often seen mobbing hornbills and other birds larger than its size.

Jungle Myna: Common. Occurs above c 900m. Absent in Top Slip and in foothills. Common in Valparai plateau past Attakatti. Not seen in Akkamalai (1700 m) or Grass Hills.

Hill Myna: Common. Recorded in good numbers in census trail ($\bar{x}=6.8/\text{km}$; $N=136$ counts, Fig. 16). Absent at times, suggesting some wandering. Despite its commonality, may warrant monitoring in the wake of its growing popularity as a cage bird in Coimbatore dist.

Whitebellied Treepie: Common. Between

1-2 ($\bar{x}=1.5/\text{km}$; $N=136$ counts) individuals counted regularly in the census trail (Fig. 17). Adult observed feeding fledged chick in summer 92. Observed in moist deciduous and evergreen forests from about 600 to 800m.

Fairy Bluebird: Common. Usually a pair seen per km ($\bar{x}=1.25/\text{km}$; $N=136$ counts) in appropriate habitat (Fig. 18), but numbers vary in accordance with fruiting of figs and other trees.

Greyheaded Bulbul: Rare. This Western Ghats endemic was recorded in small numbers only during the rainy season between late May and November (Fig. 19). More often heard than seen. The harsh *chrweet* call is somewhat reminiscent of that of the Bluethroat (*Erithacus svecicus*), and is often the only cue to its presence. Difficult to observe owing to seclusive habits and thick undergrowth habitat. This data suggests that the species could be a local migrant with

regular routes mediated by the monsoons, as in Emerald Dove (Fig. 5). At least 10 birds noted in a riverine patch of forest by the old tramline in Chalakudy forests, 26.xii.92.

Yellowthroated Bulbul: Rare. A pair seen once by the Pollachi-Valparai road, 28 kms from Pollachi, 12.v.92 (Kannan 1992). The spot is just above Aliyar Dam. The birds were seen on small trees by a roadside waterfall. Not seen there in subsequent searches. Ali and Ripley (1987) mention an 1886 record of Davison's from the Anaimalais. The status of this species is of interest considering its restricted distribution in peninsular India. The extensive removal of hill scrub (its prime habitat) due to quarrying and fuel wood collection elsewhere in its range, I have observed, is cause for concern.

Rubythroated Bulbul: Uncommon. Partial to forest edge habitat. In very small numbers at forest edges, more or less all year (Fig. 20). Has a particular preference for *Lantana* berries, which attract adjoining populations of this species.

Yellowbrowed Bulbul: Common. Between 5-14 birds seen regularly on census trail (\bar{x} =10.4/km; N=136 counts, Fig. 21). The relatively steady seasonal abundance curve is suggestive of the sedentary nature of the species. Nests from January-May. Stonor (1946) too

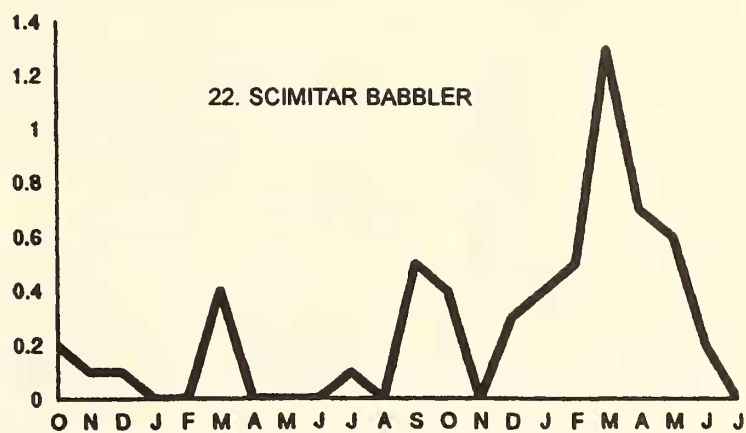
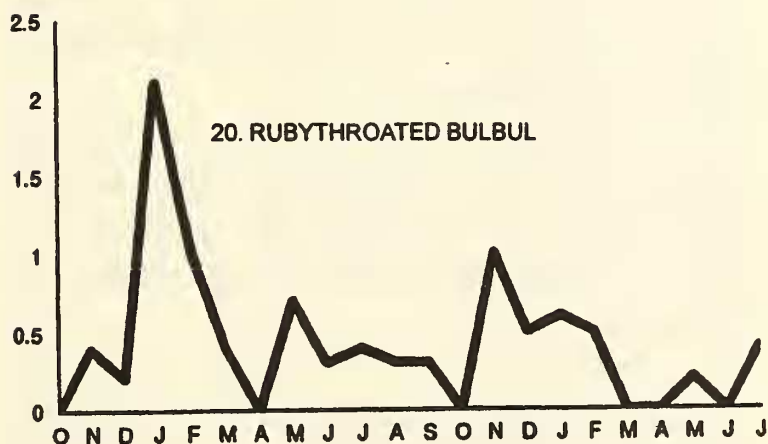


Fig. 22: Monthly mean relative abundance of Scimitar babbler along a 1-km transect through the evergreen forests of Karian Shola, Top Slip, between October 1991 and July 1993. X-axis (abscissa) represents months; Y-axis (ordinate) represents mean number of encounters per kilometre.

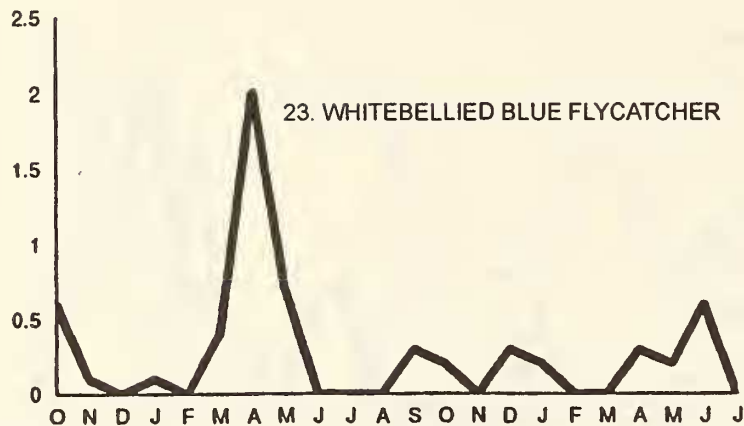
found it common in the area.

Black Bulbul: Common in the highlands beyond c 1000 m. Uncommon in Top Slip area, and rare in the foothills. Below 1000 m, the birds were seen mainly at *Eucalyptus* blooms (November-December), to which they show a particular preference. Altitudinal movements obviously governed by flowering of trees.

Slatyheaded Scimitar Babbler:



Figs. 20-21: Monthly mean relative abundances of two species of bulbuls along a 1-km transect through the evergreen forests of Karian Shola, Top Slip, between October 1991 and July 1993. X-axis (abscissa) represents months; Y-axis (ordinate) represents mean number of encounters per kilometre.



Figs. 23-24: Monthly mean relative abundances of two species of forest birds along a 1-km transect through the evergreen forests of Karian Shola, Top Slip, between October 1991 and July 1993. X-axis (abscissa) represents months; Y-axis (ordinate) represents mean number of encounters per kilometre.

Common. Difficult to see owing to dense habitat and shy habits, but often heard. Sporadically recorded at the census trail, mostly in the secondary growth at the edge (Fig. 22). Recorded around Top Slip and at higher elevations (Grass Hills). Rare or absent in the foothills.

Rufousbellied Babbler: Rare, but perhaps more common than they appear, in the foothills scrub and deciduous forests. A flock once seen near Top Slip on 21.v.93.

Wynaad Laughing Thrush: Uncommon. Large parties of 15-30 individuals seen erratically in the secondary growth and bamboo forests around Top Slip. Disappears for a few months only to reappear in big flocks for a few days before vanishing again. Apparently nomadic, with no clear seasonal movement patterns. Parent seen feeding a begging, fledged chick on 8.iii.93. Replaced by the Whitebreasted Laughing Thrush in higher elevations.

Whitebreasted Laughing Thrush: Uncommon above 1400m. Absent at lower elevations. Seen from about Kavarakkal, 14 kms from Valparai upwards through Grass Hills.

Brownbreasted Flycatcher: Rare. Seen thrice, in winter: 2.xi.91, 12.xii.92 and 18.ii.93, all in Karian Shola.

Black-and-Orange Flycatcher: Rare. One male seen in Kadamparai Shola (altitude: 1355m, off 36th hair-pin bend in the Pollachi-

Valparai road, 11 kms from Valparai). Not recorded elsewhere despite careful searches.

Whitebellied Blue Flycatcher: Uncommon. Occurs all year in low densities in evergreen forests (Fig. 23). Easier heard than seen.

Broadtailed Grass Warbler: Rare. Two pairs seen and heard singing continuously in Grass Hills, 11.v.92. The mouth, which can be seen while singing, is distinctly *black*, as mentioned under museum diagnosis by Ali and Ripley (1987). Not recorded in the same area in February 93 despite intensive search, suggesting that the species can be detected easily only while it sings. Song is similar to that described by Nichols (1937). Ali and Ripley (1987) indicate that the species is "on the whole rather scarce". Requires monitoring.

Thickbilled Warbler: Rare. Two records: Two seen in brush by Parambikulam lake on 13.iv.92; one near Top Slip on 13.xii.92. On both occasions, the bright orange mouth was conspicuous.

Tickell's Leaf Warbler: Common. Regular member of mixed hunting flocks in winter at Kadamparai Shola (1355m). Not recorded at Top Slip.

Largebilled Warbler: Common. Winter visitor. Heard more often than seen, in evergreen forest undergrowth. 2-5 individuals usually

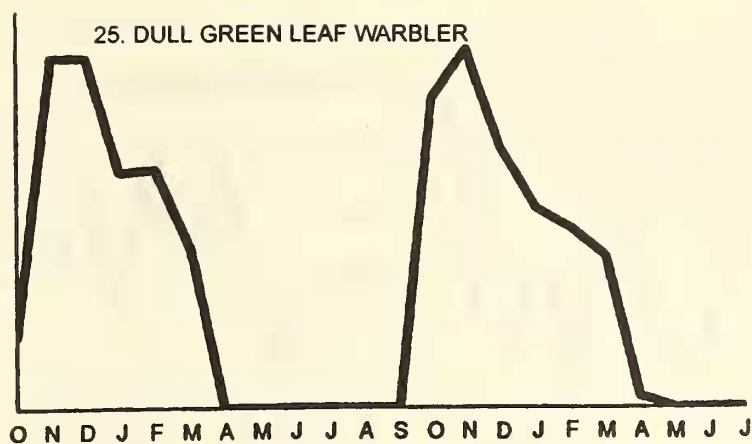


Fig. 25: Monthly mean relative abundance of Dull green leaf-warbler along a 1-km transect through the evergreen forests of Karian Shola, Top Slip, between October 1991 and July 1993. X-axis (abscissa) represents months; Y-axis (ordinate) represents mean number of encounters per kilometre.

recorded in a 1-km walk through appropriate habitat (Fig. 24). The average number of birds encountered between September and April of 92-93 was 2.3/km (N=33 counts). The distinctive, 5-noted song heard occasionally in October and April, i.e., immediately after autumn migration, and before spring migration.

Dull Green Leaf Warbler: Common. Occurs at relatively high densities in winter in evergreen forest (Fig. 25). Between 5-10

individuals recorded per km (average for October-April 92-93 was 5.5 birds/km, N=29 counts). Wintering densities estimated at 2-3 birds/hectare elsewhere in the Western Ghats (Madhusudan Katti, pers. comm.)

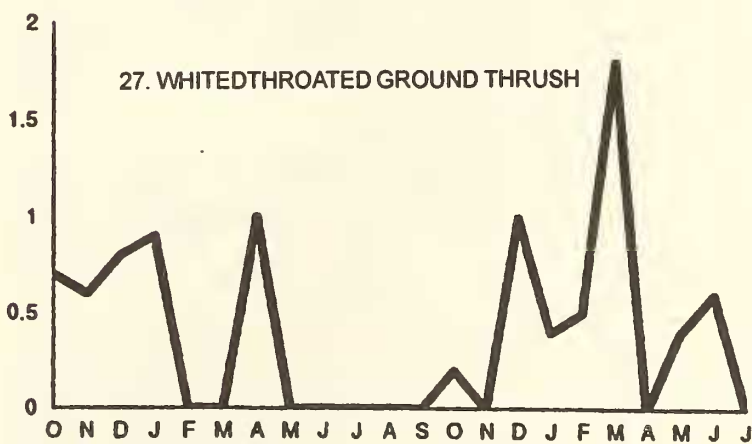
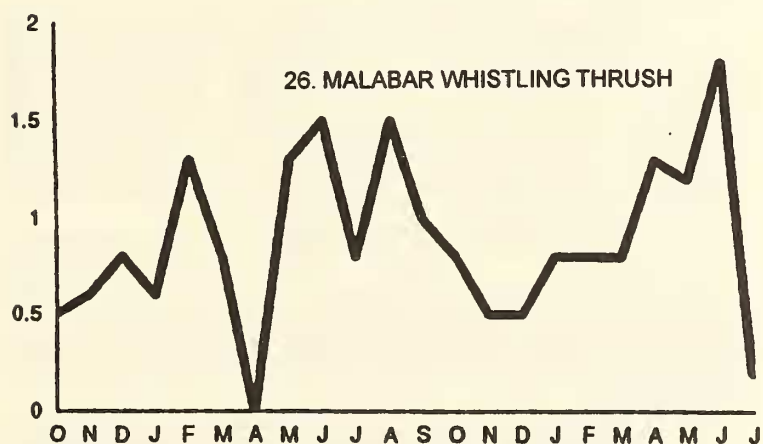
Large Crowned Leaf Warbler: Common winter visitor to the higher altitudes (Valparai Plateau). 10-15 birds seen invariably foraging with mixed hunting flocks. Recorded in Kadambarai Shola and Akkamalai forests. Uncommon in Top Slip forests, where it was seen a few times in January-February 93.

Blue Chat: Rare. A pair seen in mixed bamboo forests near Top Slip on 8.iii.93. Curiously, not recorded at higher altitudes despite intensive searches for this species, possibly overlooked.

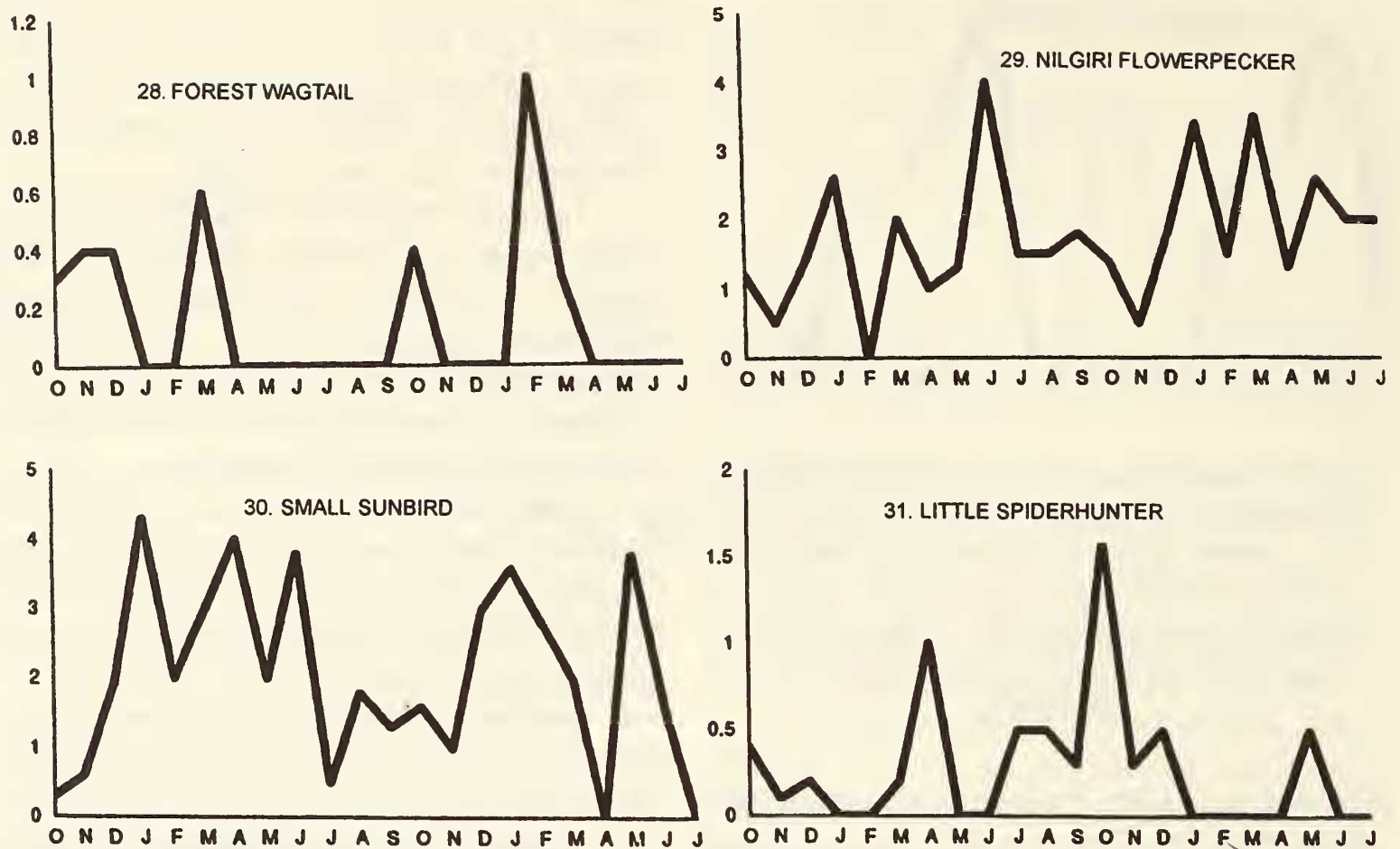
Blueheaded Rock Thrush: Rare. Winter visitor. Two records, both female, near Top Slip: 27.i.93 and 28.iii.93.

Malabar Whistling Thrush: Common. Very vocal, thus easily detectable during the onset of southwest monsoon (June), which probably accounts for the peaks in relative abundance (Fig. 26).

Whitethroated Ground Thrush: Common. Not easily recorded during the breeding season in May-September, when the birds are seclusive (Fig. 27). Courtship display



Figs. 26-27: Monthly mean relative abundances of two species of thrushes along a 1-km transect through the evergreen forests of Karian Shola, Top Slip, between October 1991 and July 1993. X-axis (abscissa) represents months; Y-axis (ordinate) represents mean number of encounters per kilometre.



Figs. 28-31: Monthly mean relative abundances of four species of forest birds along a 1-km transect through the evergreen forests of Karian Shola, Top Slip, between October 1991 and July 1993. X-axis (abscissa) represents months; Y-axis (ordinate) represents mean number of encounters per kilometre.

observed on 2.iii.92: "Male sits bolt upright near female, head bowed, bill pointing directly down, wings drooping, uttering an endless delightful series of warbling chirruping notes...same display and vocalisations in progress at same site 1.25 hours later" (Author's field notes). This is almost the same sequence described by Betts, as cited in Ali and Ripley (1987).

Nilgiri, or Smallbilled, Thrush: Rare. Seen once, 23.x.1991 in Karian Shola. Seen here in January 1988 by some competent birders (J.N.Prasad and S. Karthik, pers. comm.). Ali and Ripley (1987) state that this species is uncommon, and place its altitudinal range at 600-2100 m in these hills. The fact that it was noted just once despite specific and careful scrutiny at various elevations in the appropriate habitat is intriguing and a cause for concern.

Blackbird: Rare. Maybe commoner at

higher elevations, but seen only in the first (11.v.92) of the two Grass Hills surveys. Noted twice in the Top Slip area, November 91 and December 92, both sightings in evergreen and mixed deciduous forests.

Nilgiri Pipit: Common. Only in Grass Hills. Call: a distinctive, soft *sink....sink*, hitherto unrecorded in the literature (see Ali and Ripley 1987). Commonly heard in May 92, in the middle of the breeding season.

Forest Wagtail: Uncommon. Winter visitor (September-March). Seen in very small numbers inside evergreen forests (Fig. 28) around Top Slip.

Nilgiri, or Plaincoloured, Flowerpecker: Common. Encountered regularly (Fig. 29) in evergreen forests ($\bar{x}=1.6$; $N=136$ counts) and in mixed forests. Almost always noted in large trees with clumps of mistletoe. Nests discovered

September 91 and February 92 in Top Slip.

Small Sunbird: Common (\bar{x} =2.07/km; N=136 counts). Fluctuation in local abundance probably synchronised with flowering of forest vegetation (Fig. 30). Nests discovered in Karian Shola and in Kadambarai January 93.

Little Spiderhunter: Common. Year-round denizen of evergreen forests (Fig. 31), with local movements probably governed by flowering phenologies. Many signs of nesting evident in the summer months (February-May).

White-eye: Common above c 1000 m; Rare in Top Slip, where a flock was seen once, 20.ix.92.

Rufousbellied Munia: Uncommon. Seen in evergreen forest clearings off and on, suggesting local movements. Occurs from about 750 m up to 1350 m (Kadambarai). Not recorded in Grass Hills.

Common Rosefinch: Rare. Winter visitor. Flock of 4-5 birds, mostly brown, one pink-plumaged, seen in Karian Shola from 7-9 January 93.

SIGNIFICANT SPECIES THAT WERE NOT RECORDED
DESPITE CAREFUL SEARCHES

Legge's Baza *Aviceda jerdoni*: This forest raptor has always been considered a rare resident of evergreen forests south of c 12° N latitude, between 150 and 900 m altitude (Ali and Ripley 1987). The fact that it was unrecorded in these two years, highlights its rare status. With much of its optimal habitat having been destroyed in the past two decades, the species may be threatened. A comprehensive survey for this forest raptor is necessary throughout the Ghats to ascertain its current status and conservation issues.

Malabar Pied Hornbill *Anthracoceros coronatus*: Kinloch (1921) recorded this species as "very common" in the Nelliampathies. Sivaprasad (pers. comm.) reported seeing it in the Nelliampathies in the 1990's. Sugathan (pers. comm.) netted and banded an individual in Parambikulam. The undoubted scarcity of the species in the Anaimalais can only be explained

by its preference to moister facies than those available in the rainshadow areas of the east. Nevertheless, the species should be monitored carefully owing to its seemingly increasing scarcity.

Fantail Warbler *Cisticola exilis*: Ali and Ripley (1987) record this species as a "common resident" in the southern hills "above 900 m". Intensive hunts in several localities with appropriate grassy habitat above 900 m (Pandaravarai, Umayamalai, Vengoli, Pamban Malai, Kozhumbu Malai, Karimala Gopuram) proved futile. Grass Hills (c. 2200 m), with its vast expanse of grassy undulating terrain seems its ideal habitat. Also, Perunkundru (c 1500 m), a grass covered peak known for its Nilgiri Tahr, should provide excellent haunts for this warbler.

Whitebellied Shortwing *Brachypteryx major*: Ali and Ripley (1987) indicate that there are two races of this shortwing in south India, separated by the Palghat Gap. The Grass Hills area, with its abundant dense sholas, should offer optimal habitat for the whitebellied race (*B. m. albiventris*). Presumably, this bird was overlooked during this project owing to its shy and secretive habits. All the surveys to the Valparai Plateau and Grass Hills failed to yield a sighting. There are two specimens in the BNHS collection, both obtained above 1800 m in the Palni Hills (Abdulali 1987).

Woodcock *Scolopax rusticola*: The absence of any sighting of this species in two consecutive winters in ostensibly appropriate country should be considered noteworthy in the light of the statement of Ali and Ripley (1987) more than 20 years ago that "the clearing away of forests for potato and tea cultivation in the last forty years has progressively reduced its abundance in many of its best known habitats". With the continuing destruction of forests in the south Indian hills, it is possible that the situation, of concern as it may have been then, has only deteriorated since. The phasing out of woodcock hunting as a sport, which was popular during the colonial era, has deprived us of an important

source of anecdotal information regarding population trends. This calls for an increased surveillance of wintering populations of this and other species of birds in peninsular India.

CONCLUSIONS

Ever since colonial pioneers like Carver Marsh opened up the Anaimalais for tea plantations and lumbering operations in the 1800s, vast areas have been denuded or selectively logged. The findings in this study suggest that despite this severe encroachment, avifaunal species composition was not affected drastically in the Anaimalais. No clear case of local bird extinction could be alleged by comparison with the sketchy historical records. This type of avian resilience has been reported by earlier studies from elsewhere in the Western Ghats (Daniels *et al.* 1990). However, the situation is unstable because destruction continues unabated in the face of increasing need for tea and timber revenue. Over 500 mature rainforest trees were felled in 1992 in Valparai Plateau (Puthuthottam Estate) despite strong protests from environmental groups, and plans are afoot to increase the tea area by 3,350 ha. The lack of quantitative historical data on bird abundance precluded an assessment of the impact of human activities on bird numbers. Since continual human encroachment seems inevitable, there is an urgent need to monitor

forest bird populations. It is hoped that this report would instigate the establishment of bird census programmes specifically to monitor forest birds in the Anaimalai Hills and elsewhere in the Western Ghats.

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APPENDIX

Systematic list of the birds recorded in the Anaimalai Hills between August 1991 and July 1993.

Distribution codes: F=Foothills; T=Top Slip area; P=Parambikulam area; V=Valparai Plateau (includes Akkamalai forests); G=Grass Hills. Sholayar and Chalakudy are not included here (see text).

Status codes: C=Common; U=Uncommon; R=Rare; W=Winter visitor; B=Evidence of breeding in the area (nests or newly fledged chick(s) recorded). For a further explanation of the status codes, see "Methods" section. Asterisk (*) by species name indicates more details furnished in text. An "e" superscripted by species name indicates endemic to Western Ghats.

No.	Species	Status	Dist.
1	Little Grebe <i>Tachybaptus ruficollis</i>	R	F
2	Large Cormorant <i>Phalacrocorax carbo</i>	U	P
3	Little Cormorant <i>P. niger</i>	U	P
4	Darter <i>Anhinga rufa</i>	U	P
5	Grey Heron <i>Ardea cinerea</i>	U	F
6	Pond Heron <i>Ardeola grayi</i>	U	F,P
7	Cattle Egret <i>Bubulcus ibis</i>	U	F,V
8	Large Egret <i>Ardea alba</i>	U	F
9	Smaller Egret <i>Egretta intermedia</i>	U	F
10	Little Egret <i>E. garzetta</i>	U	P
11	Malay Bittern* <i>Gorsachius melanolophus</i>	R	T,P
12	Whitenecked Stork <i>Ciconia episcopus</i>	R	F
13	Shoveller <i>Anas clypeata</i>	R,W	T(flt)
14	Blackwinged Kite <i>Elanus caeruleus</i>	U	T,G
15	Blackcrested Baza* <i>Aviceda leuphotes</i>	R	T

APPENDIX (contd.)

No.	Species	Status	Dist.
16	Honey Buzzard <i>Pernis ptilorhyncus</i>	U,B	T,P
17	Pariah Kite <i>Milvus migrans</i>	C,B	towns
18	Brahminy Kite <i>Haliastur indus</i>	U,B	F,T
19	Shikra <i>Accipiter badius</i>	U,B	T
20	Crested Goshawk* <i>A. trivirgatus</i>	R	T,V
21	Besra Sparrowhawk* <i>A. virgatus</i>	R	T
22	Buzzard <i>Buteo buteo</i>	U,W	F
23	Crested Hawk-eagle* <i>Spizaetus cirrhatus</i>	U	F,T
24	White-eyed Buzzard-Eagle <i>Butastur teesa</i>	R	F
25	Booted Hawk-Eagle <i>Hieraetus pennatus</i>	U,W	F,T
26	Rufousbellied Hawk-Eagle* <i>H. kienerii</i>	R	T
27	Black Eagle <i>Ictinaetus malayensis</i>	U	T,P
28	Greyheaded Fishing-Eagle* <i>Ichthyophaga ichthyaetus</i>	R,B	P
29	Short-Toed Eagle <i>Circaetus gallicus</i>	R	F
30	Crested Serpent Eagle <i>Spilornis cheela</i>	U	F,T,P
31	Osprey* <i>Pandion haliaetus</i>	R,W	F,P
32	Shaheen Falcon* <i>Falco peregrinus</i>	R,B	F,T
33	Kestrel <i>Falco tinnunculus</i>	U	F,T
34	Grey Partridge <i>Francolinus pondicerianus</i>	U?	F
35	Jungle Bush Quail* <i>Perdica asiatica</i>	R?	T
36	Red Spurfowl* <i>Galloperdix spadicea</i>	U,B	T,P
37	Grey Junglefowl* <i>Gallus sonneratii</i>	C,B	T,P,V
38	Common Peafowl <i>Pavo cristatus</i>	U	F
39	Whitebreasted Waterhen <i>Amaurornis phoenicurus</i>	R,B	T,V
40	Redwattled Lapwing <i>Vanellus indicus</i>	U	T,P
41	Wood Sandpiper <i>Tringa glareola</i>	R,W	T
42	Common Sandpiper <i>T. hypoleucos</i>	R,W	F
43	Common Tern <i>Sterna hirundo</i>	U,W	P
44	Pompadour Pigeon* <i>Treron pompadora</i>	C,B	T,P,V
45	Imperial Pigeon* <i>Ducula badia</i>	C,B?	T,P,V
46	Blue Rock Pigeon <i>Columba livia</i>	U	T
47	Nilgiri Woodpigeon* ^c <i>C. elphinstonii</i>	R	T
48	Ring Dove <i>Streptopelia decaocto</i>	U	F
49	Spotted Dove <i>S. chinensis</i>	U	F
50	Little Brown Dove <i>S. senegalensis</i>	U	F
51	Emerald Dove* <i>Chalcophaps indica</i>	U,B	T,P,V
52	Blossomheaded Parakeet* <i>Psittacula cyanocephala</i>	(see text)	T,P
53	Bluewinged Parakeet* ^c <i>P. columboides</i>	C	T,P
54	Indian Lorikeet* <i>Loriculus vernalis</i>	C	T,P,V
55	Pied Crested Cuckoo* <i>Clamator jacobinus</i>	R	F,T
56	Large Hawk Cuckoo* <i>Cuculus sparveroides</i>	R,W	T
57	Common Hawk Cuckoo <i>C. varius</i>	U	T
58	Bay Banded Cuckoo* <i>Cacomantis sonneratii</i>	R?	T
59	Koel <i>Eudynamis scolopacea</i>	U	T
60	Small Greenbilled Malkoha <i>Rhopodytes viridirostris</i>	U	T

APPENDIX (contd.)

No.	Species	Status	Dist.
61	Sirkeer Cuckoo* <i>Taccocua leschenaultii</i>	R	F,T
62	Bay Owl* <i>Phodilus badius</i>	R	T,P
63	Scops Owl* <i>Otus scops</i>	U?	T
64	Collared Scops Owl <i>O. bakkamoena</i>	R	F,T
65	Great Horned Owl <i>Bubo bubo</i>	R	F,T
66	Forest Eagle Owl* <i>B. nipalensis</i>	R	T
67	Brown Fish Owl* <i>B. zeylonensis</i>	U	T
68	Jungle Owlet <i>Glaucidium radiatum</i>	U	T
69	Brown Hawk-Owl* <i>Ninox scutulata</i>	U	T
70	Spotted Owlet <i>Athene brama</i>	C	F
71	Ceylon Frogmouth* <i>Batrachostomus moniliger</i>	R,B	T
72	Great Eared Nightjar* <i>Eurostopodus macrotis</i>	R	T,P
73	Jungle Nightjar* <i>Caprimulgus indicus</i>	R	F,T
74	Longtailed Nightjar* <i>C. macrurus</i>	U	T
75	Edible-Nest Swiftlet* <i>Collocalia unicolor</i>	U	T,G
76	Large Brownthroated Spinetail Swift* <i>Chaetura gigantea</i>	C	T,P
77	Whiterumped Spinetail* <i>C. sylvatica</i>	R	T
78	Alpine Swift* <i>Apus melba</i>	R	T
79	House Swift <i>A. affinis</i>	U	T
80	Palm Swift <i>Cypsiurus parvus</i>	C	F,T
81	Crested Tree Swift <i>Hemiprocne longipennis</i>	C	T,P,V
82	Malabar Trogon* <i>Harpactes fasciatus</i>	U,B	T,P,V
83	Pied Kingfisher <i>Ceryle rudis</i>	U	F,P
84	Whitebreasted Kingfisher <i>Halcyon smyrnensis</i>	U	F,T
85	Chestnut headed Bee-Eater <i>Merops leschenaultii</i>	C	T,P,V,G
86	Green Bee-Eater <i>M. orientalis</i>	C	F
87	Bluebearded Bee-Eater* <i>Nyctyornis athertoni</i>	R,B	T
88	Indian Roller <i>Coracias benghalensis</i>	U	F,T
89	Broadbilled Roller* <i>Eurystomus orientalis</i>	U	T
90	Hoopoe <i>Upupa epops</i>	U	F,T
91	Malabar Grey Hornbill* ^c <i>Tockus griseus</i>	C,B	T,P,V
92	Great Pied Hornbill* <i>Buceros bicornis</i>	U,B	F,T,P,V
93	Large Green Barbet <i>Megalaima zeylanica</i>	U	F
94	Small Green Barbet* <i>M. viridis</i>	C	T,P,V
95	Crimsonthroated Barbet* <i>M. rubricapilla</i>	C	T,P,V
96	Crimsonbreasted Barbet <i>M. haemacephala</i>	U	F,T
97	Speckled Piculet* <i>Picumnus innominatus</i>	?	V
98	Rufous Woodpecker* <i>Micropternus brachyurus</i>	R	T
99	Yellownaped Woodpecker <i>Picus chlorolophus</i>	U,B	T
100	Threetoed Goldenbacked Woodpecker <i>Dinopium javanense</i>	U	T,V
101	Great Black Woodpecker* <i>Dryocopus javensis</i>	U,B	T

APPENDIX (contd.)

No.	Species	Status	Dist.
102	Pied Woodpecker <i>Picoides mahrattensis</i>	R	T
103	Heartspotted Woodpecker* <i>Hemicircus canente</i>	U,B	T,P,V
104	Large Goldenbacked Woodpecker <i>Chrysocolaptes lucidus</i>	U,B	T,V
105	Pigmy Woodpecker <i>Picoides nanus</i>	U	F,T
106	Indian Pitta* <i>Pitta brachyura</i>	R,W	T,V
107	Bush Lark <i>Mirafra assamica</i>	U	F
108	Ashycrowned Finchlark <i>Eremopterix grisea</i>	R	F
109	Eastern Skylark <i>Alauda gulgula</i>	U	G
110	Dusky Crag Martin <i>Hirundo concolor</i>	U,B?	P
111	Common Swallow <i>H. rustica</i>	C,W	F,T
112	House Swallow* <i>H. tahitica</i>	R	G
113	Redrumped Swallow <i>H. daurica</i>	U,B?	F,T,P
114	Rufousbacked Shrike <i>Lanius schach</i>	R	F,T,V
115	Brown Shrike <i>L. cristatus</i>	U	F,T
116	Golden Oriole <i>Oriolus oriolus</i>	R,W	F,T,V
117	Blacknaped Oriole* <i>O. chinensis</i>	R,W	T
118	Blackheaded Oriole <i>O. xanthornus</i>	U	F,T
119	Black Drongo <i>Dicrurus adsimilis</i>	U	F,T
120	Grey Drongo <i>D. leucophaeus</i>	U,W	T,V
121	Whitebellied Drongo <i>D. caerulescens</i>	U,W	F,T
122	Bronze Drongo <i>D. aeneus</i>	C,B	T
123	Haircrested Drongo* <i>D. hottentottus</i>	R?	T
124	Greater Racket-tailed Drongo* <i>D. paradiseus</i>	C	T,P,V
125	Ashy Swallow-shrike <i>Artamus fuscus</i>	C	F
126	Greyheaded Myna <i>Sturnus malabaricus</i>	U	F
-	Greyheaded Myna (Whiteheaded race)	C	T,P
127	Blackheaded Myna <i>Sturnus pagodarum</i>	R	T
128	Common Myna <i>Acridotheres tristis</i>	C	F,T
129	Jungle Myna <i>A. fuscus</i>	C	V,930m+
130	Hill Myna* <i>Gracula religiosa</i>	C	T,P,V
131	Indian Treepie <i>Dendrocitta vagabunda</i>	U	T
132	Whitebellied Treepie* <i>D. leucogastra</i>	C,B	T,P
133	House Crow <i>Corvus splendens</i>	C	T,P
134	Jungle Crow <i>C. macrorhynchos</i>	C	T,P
135	Pied Flycatcher-Shrike <i>Hemipus picatus</i>	U,B	T,P,V
136	Large Woodshrike <i>Tephrodornis virgatus</i>	U,B	T,P
137	Common Woodshrike <i>T. pondicerianus</i>	U	F
138	Large Cuckoo-Shrike <i>Coracina novaehollandiae</i>	U	T,P
139	Blackheaded Cuckoo-Shrike <i>C. melanoptera</i>	R	T,P
140	Scarlet Minivet <i>Pericrocotus flammeus</i>	C,B	T,P,V
141	Small Minivet <i>P. cinnamomeus</i>	U	F,T
142	Common Iora <i>Aegithina tiphia</i>	C	F,T
143	Goldfronted Chloropsis <i>Chloropsis aurifrons</i>	C	T,P
144	Fairy Bluebird* <i>Irena puella</i>	C	T,P,V
145	Greyheaded Bulbul* <i>Pycnonotus priocephalus</i>	R	T
146	Rubythroated Bulbul* <i>P. melanicterus</i>	U	T,P
147	Redwhiskered Bulbul <i>P. jocosus</i>	U	F,T
148	Redvented Bulbul <i>P. cafer</i>	C	F

APPENDIX (contd.)

No.	Species	Status	Dist.
149	Yellowthroated Bulbul* <i>P. xantholaemus</i>	R	V
150	Whitebrowed Bulbul <i>P. luteolus</i>	U	F,T
151	Yellowbrowed Bulbul* <i>Hypsipetes indicus</i>	C,B	T,P,V
152	Black Bulbul* <i>H. madagascariensis</i>	(see text)	T,P,V
153	Spotted Babbler <i>Pellorneum ruficeps</i>	C	F,T,P, V
154	Slatyheaded Scimitar Babbler* <i>Pomatorhinus horsfieldii schisticeps</i>	C,B	T,P,V,G
155	Rufousbellied Babbler* <i>Dumetia hyperythra</i>	R?	F,T
156	Blackheaded Babbler <i>Rhopocichla atriceps</i>	U	T,P,V
157	Rufous Babbler ^c <i>Turdoides subrufus</i>	U	T,P
158	Jungle Babbler <i>T. striatus</i>	C,B	T,P
159	Whiteheaded Babbler <i>T. affinis</i>	C	F
160	Wynaad Laughing Thrush* <i>Garrulax delesserti</i>	U,B	T
161	Whitebreasted Laughing Thrush* ^e <i>G. jerdoni</i>	U	V,G
162	Quaker Babbler <i>Alcippe poioicephala</i>	C	T,P,V
163	Brown Flycatcher <i>Muscicapa latirostris</i>	U,W	F,T,V
164	Brownbreasted Flycatcher* <i>M. muttui</i>	R,W	T
165	Rufoustailed Flycatcher <i>M. ruficauda</i>	U,W	T,V
166	Black & Orange Flycatcher* ^c <i>M. nigrorufa</i>	R	V
167	Whitebellied Blue Flycatcher* ^e <i>M. pallipes</i>	U	T,P
168	Bluethroated Flycatcher <i>M. rubeculoides</i>	U,W	F,T,P
169	Tickell's Blue Flycatcher <i>M. tickelliae</i>	U	T,P
170	Verditer Flycatcher <i>M. thalassina</i>	U	T,P,V
171	Nilgiri Flycatcher ^c <i>M. albicaudata</i>	C	V,G
173	Greyheaded Flycatcher <i>Culicicapa ceylonensis</i>	C,B	V,G
174	Paradise Flycatcher <i>Terpsiphone paradisi</i>	U,W	F,T,P,V
175	Blacknaped Flycatcher <i>Hypothymis azurea</i>	C	T,P,V
176	Str. Fantail Warbler <i>Cisticola juncidis</i>	U	F
177	Franklin's Wren-Warbler <i>Prinia hodgsonii</i>	C,B	F,T,P
178	Jungle Wren-Warbler <i>P. sylvatica</i>	U	F
179	Tailor Bird <i>Orthotomus sutorius</i>	U	F,T
180	Broadtailed Grass Warbler* ^c <i>Schoenicola platyura</i>	R	G
181	Thickbilled Warbler* <i>Acrocephalus aedon</i>	R,W	P
182	Reed Warbler <i>Acrocephalus dumetorum</i>	U,W	F,T,V
183	Tickell's Leaf Warbler* <i>Phylloscopus affinis</i>	C,W	V
184	Largebilled Leaf Warbler* <i>P. magnirostris</i>	C,W	T,P,V
185	Dull Green Leaf Warbler* <i>P. trochiloides</i>	C,W	T,P,V
186	Large Crowned Leaf Warbler* <i>P. occipitalis</i>	(see text)	T,P,V
187	Indian Blue Chat* <i>Erithacus brunneus</i>	R,W	T
188	Magpie Robin <i>Copsychus saularis</i>	U	T,P
189	Shama <i>C. malabaricus</i>	U	T
190	Pied Bush Chat <i>Saxicola caprata</i>	C	V
191	Indian Robin <i>Saxicoloides fulicata</i>	U	F

APPENDIX (contd.)

No.	Species	Status	Dist.
192	Blueheaded Rock Thrush* <i>Monticola cinclorhynchus</i>	R,W	T
193	Malabar Whistling Thrush* <i>Myiophonus horsfieldii</i>	C	T,P,V
194	Whitethroated Ground Thrush* <i>Zoothera citrina</i>	C	T,P
195	Nilgiri or Smallbilled Thrush* <i>Z. dauma</i>	R	T
196	Blackbird* <i>Turdus merula</i>	R?	T,G
197	Grey Tit <i>Parus major</i>	U	T,P,V
198	Yellowcheeked Tit <i>P. xanthogenys</i>	C	V
199	Velvetfronted Nuthatch <i>Sitta frontalis</i>	U	T,V
200	Indian Pipit <i>Anthus novaeseelandiae</i>	U	T
201	Nilgiri Pipit* ^c <i>A. nilghiriensis</i>	C	G
202	Forest Wagtail* <i>Motacilla indica</i>	U,W	T,P
203	Grey Wagtail <i>M. cinerea</i>	U,W	T,P,V
204	Large Pied Wagtail <i>M. maderaspatensis</i>	U	F,T
205	Thickbilled Flowerpecker <i>Dicaeum agile</i>	U	T
206	Tickell's Flowerpecker <i>D. erythrorhychos</i>	R	F
207	Nilgiri Flowerpecker* <i>D. concolor</i>	C,B	F,T,P,V
208	Purplerumped Sunbird <i>Nectarinia zeylonica</i>	U,B	F,T
209	Small Sunbird* ^c <i>N. minima</i>	C,B	T,P,V
210	Loten's Sunbird <i>N. lotenia</i>	R	T
211	Purple Sunbird <i>N. asiatica</i>	C	F
		U	T
212	Little Spiderhunter* <i>Arachnothera longirostris</i>	C,B	T,P,V
213	White-eye* <i>Zosterops palpebrosa</i>	C	V
		R	T
214	House Sparrow <i>Passer domesticus</i>	C	T,V
215	Whitethroated Munia <i>Lonchura malabarica</i>	R	F
216	Whitebacked Munia <i>L. striata</i>	R,B	T
217	Rufousbellied Munia* <i>L. kelaarti</i>	U	T,P,V
218	Common Rosefinch* <i>Carpodacus erythrinus</i>	R	T